

REMARKS

Claims 1-14 are under examination, and Claims 15-43 have been withdrawn as non-elected subject matter.

1. Rejection of Claims Under 35 U.S.C. §103(a).

The Examiner has made three rejections under 35 U.S.C. §103(a) as follows: (1) rejection of Claims 1-3 and 6 over Radin et al. in view of Lemons, Day et al. (US 6,358,531) and/or Inoue et al. (US 4,798,585); Claims 1-6 over Radin et al. in view of Lemons, and further in view of Day et al. (US 6,358,531) and/or Inoue et al. (US 4,798,585); and Claims 1-3 and 7-14 over Radin et al. in view of Lemons, Day et al. (US 6,358,531) and/or Inoue et al. (US 4,798,585) and further in view of Gerhart. To establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), the Examiner must show that (1) the references teach all the elements of the claimed invention, (2) the references contain some teaching, suggestion or motivation to combine the references, and (3) the references suggest a reasonable expectation of success. In this rejection, the combination of references fails to teach all of the elements of the claimed invention, namely, a hollow sintered calcium-containing microstructure.

The three rejections of the Examiner are stated verbatim as they were in the previous Office Action dated 10/18/05. The Examiner's response to Applicants' arguments was simply that Applicants were improperly attacking the references individually in an obviousness rejection. Initially, Applicants reiterate the arguments made in the prior response dated April 18, 2006. In addition, the Examiner states that "one of ordinary skill in the art would have been motivated by routine practice and the cited references to sinter the hollow calcium structures of Radin with a reasonable expectation for successfully obtaining the hollow calcium shell of Radin." Applicants submit this is an improper motivation to combine the cited references.

More particularly, the structures of Radin are described as being "formed as a result of *in vitro* excavation of silica-based, calcium and phosphate containing glass particles." WO 97/41842, p. 4, ll. 5-7. Further, the production of the structures of Radin

is described as the “*in vitro* excavation of the silica-based, Ca, P-containing glass granules and transformation into CaP-shells [] achieved by differential immersion of the glass granules in solutions which provoke the dissolution of silicon from the glass matrix.” WO 97/41842, p. 4, ll. 28-32. Radin further describes the reactions in the process to make the structures as: loss of soluble silica along with migration of Ca and PO₄ ions through highly porous glass to the surface; leaching of the ions to a solution along with partial accumulation at the surface; formation of a CaP-surface layer; growth of the CaP-layer along with continuous silica dissolution. While the resulting structures are described as having a CaP shell, the material would not be a conventional CaP powder that is used in a sintering process to make ceramics. Accordingly, the Examiner’s suggestion that one of ordinary skill in the art would have been motivated by routine practice to sinter the materials of Radin is incorrect. The formation of a sintered CaP material from the structures of Radin, if it is even technically possible, is by no means routine practice. The materials of Radin are fairly unique and to the Applicants’ knowledge, sintering of such materials has not been demonstrated. If the Examiner maintains that such materials can be sintered by routine practice with a reasonable expectation of success, the Examiner is requested to provide evidence in support of the position that such a process is even possible, and that a skilled person would be able to practice it based on routine skill.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event

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that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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